

**(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)**

**(19) World Intellectual Property  
Organization  
International Bureau**



**(43) International Publication Date**  
**10 June 2004 (10.06.2004)**

**PCT**

**(10) International Publication Number**  
**WO 2004/049293 A1**

- (51) **International Patent Classification<sup>7</sup>:** **G09G 3/34**
- (21) **International Application Number:** **PCT/IB2003/005122**
- (22) **International Filing Date:** **12 November 2003 (12.11.2003)**
- (25) **Filing Language:** **English**
- (26) **Publication Language:** **English**
- (30) **Priority Data:**  
60/429,707 27 November 2002 (27.11.2002) US
- (71) **Applicant (for all designated States except US):** **KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL];**  
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **LEYVI, Evgeniy [US/US]; P.O.Box 3001, Briarcliff Manor, NY 10510-8001 (US). DALAL, Sandeep, M. [US/US]; P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US).**
- (81) **Designated States (national):** **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,**

KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

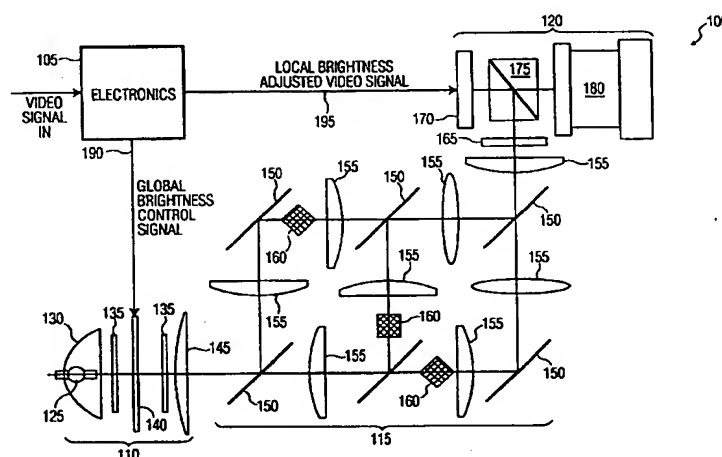
- (84) Designated States (regional):** ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK,

*[Continued on next page]*

- (54) Title: METHOD OF IMPROVING THE PERCEPTUAL CONTRAST OF DISPLAYED IMAGES



- (57) Abstract:** A method of processing an image comprising: measuring a set of pixel dependent attributes for a pixelated video frame, each pixel of the frame having a gray level, each gray level associated with a brightness level; and in response to each and every pixel dependent attribute of the set of pixel dependent attributes meeting a corresponding criteria, decreasing the overall brightness of the video frame in accordance with a global brightness signal and increasing the brightness of the gray level of each pixel of the video frame in accordance with a local brightness control signal, the amount a particular gray level brightness is increased being dependent upon the particular gray level and a function of the measured pixel dependent attributes.

**WO 2004/049293 A1**